YANMAR

YANMAR AMERICA SERVICE ADVISORY

Advisory Number: YASA2012-001–M

THIS ADVISORY APPLIES TO: ☐ **Construction** ☐ **Industrial** ☒ **Marine**

DATE: January 31, 2012
TO: All USA Marine Distributors & Dealers
SUBJECT: EPA Non-Compliant Engine Replacement
MODEL(S): All 4LHA, 6LY2A, 6CXM and 6LPA-STP2 (Tier 2)

Yanmar Marine New Replacement Engines for EPA Non-Compliant

As you already know, Yanmar Marine discontinued the sale of **4LHA, 6LYA, 6LY2A, and 6CXM** engines in the U.S.A market in 2006 and 2007 calendar year, because these engines were not compliant to EPA Tier 2 Emission Standards mandated at that time. Today, Yanmar Marine is adding another engine to the list, because the **6LPA-STP2 (Tier 2)** engine does not comply with the upcoming Tier 3 Emission Standards which started 1/1/2012. However, EPA Marine regulations allows Yanmar Marine to supply new replacement engines to boats/vessels owners once it has been determined that there is no engine produced and available which is certified to the standards outlined in 40 CFR Part 94 and 40 CFR Part 1042 with the appropriate physical or performance characteristics to repower the existing marine vessels. Each new replacement engine will be labeled and identified as such according to the requirements outlined in **40 CFR Part 94.1103(b) (3) (iii) and (iv) and 40 CFR § 1042.615 Replacement Engine Exemption.** Additionally, each new replacement engine will be identical in all material respects to a certified configuration of the same or later model year as the engine being replaced. Each new replacement engine will be labeled and identified as such according to the requirements in **40 CFR Part 1068.240(b) (6) (i) and (ii).**

This Marine Service Advisory follows the same procedure explained in the Marine Service Advisory (MSA) 07-020 issued on August 16, 2007.

Repowering With a New Engine

Translating the above into Leman's English, if a vessel owner is going to replace an existing engine on an existing vessel with a ***new*** **engine,** then the new engine must comply with **EPA Tier 3 standards** that are in effect when the repower occurs. EPA provides a replacement exemption which allows a vessel owner to replace an existing engine with a new uncertified engine or a new engine certified to an earlier standard if it can be demonstrated that no new engine that is certified to the emission limits in effect at that time is produced by any manufacturer with the appropriate physical or performance characteristics needed to repower the vessel. In other words, if a new certified engine is not available, an engine manufacturer in this case Yanmar Marine may produce a replacement engine that does not meet all of the requirements of our marine emission-control program.

For instance, if a vessel has twin uncertified engines and it becomes necessary to replace one of them, the vessel owner can request approval for an engine manufacturer to produce a new uncertified engine if it can be demonstrated without any doubt that the vessel will not function properly if the engines are not identically matched. There are other instances where there no other engines manufactured that can be used.

However, there are certain conditions for this exemption. The replacement engine must meet standards at least as stringent as those of the original engine. Therefore, for example, if the original engine is a pre-Tier 1 engine, then the replacement engine need not meet emission limits. If it is a Tier 1 engine, it need not meet the Tier 2 limits if those are the limits in place when the replacement occurs. Another condition that must be considered, in twin or triple engine applications, is the engine(s) that is not being replaced must have a substantial amount of expected useful life left. If the engine(s) is at or near the end of its expected useful life then all engines will need to be replaced with EPA compliant engines. ***These conditions will be examined on a case by case basis by Yanmar Sales Department and Customer Support Department team members when an application is submitted by Yanmar's distributors and/or customers.***

Also as a condition for the exemption, the engine manufacturer must take possession of the original engine or make sure it is destroyed. In addition, the replacement engine must be clearly labeled to show that it does not comply with the standards and that sale or installation of the engine for any purpose other than as a replacement engine is a violation of federal law and subject to civil penalty.

Through the Technical Amendments Package, the EPA now allows manufacturer determination that no compliant engine can be used for a replacement engine, provided that certain conditions are met. First, the manufacturer must determine that no certified engine is available **(see attachment 'B')**, either from its own product lineup or that of the manufacturer of the original engine (if different). In cases where a vessel owner simply wants to replace an engine (a non-catastrophic failure) with a new version of the same engine as part of a vessel overhaul for example, it will still be necessary to obtain Administrator (EPA) approval before the replacement. Second, the engine manufacturer must document the reasons why an engine of a newer tier is not usable, and this report must be made available to the EPA upon request. Finally, no other significant modifications to the vessel can be made as part of the process of replacing the engine, or for a period of 6 months thereafter.

Repowering With a (Yanmar Remanufactured) Engine (not available at this time)

In the near future if a vessel owner replaces an existing engine with a (Yanmar remanufactured) engine, the replacement engine that goes through a remanufacturing process must be certified to the model year that it was produced. Any rebuild to an engine (or work that is not remanufacturing) still requires the engine to maintain its certification standard of the model year it was originally produced to.

Disposal of the Replaced Engine

The current regulations require the engine manufacturer to take possession of the engine that is replaced or have a process in place to verify the engine was destroyed in the field. At this time, Yanmar America chooses to have the cores destroyed with proof of destructions sent to Yanmar.

Ordering New Replacement Engines

At time of ordering non-EPA engines, Yanmar America Cooperation Sales and Customer Support Department will gather all information on engine being replaced. 'Export' and 'NSE' from the distributor on each engine ordered. **(See order form attached)**

Replacement Inquiry and Disposal of the Replacement Engine

Before engines are replaced, Yanmar America Cooperation will require information for each engine using the report form **('A') attached**. After information is reviewed and authorized by the Customer Support Department Yanmar will require the following items listed in the report: 1) New engine information 2) Disposal engine information 3) Engine model name plate 4) Picture of the drilled cylinder block. An agreement will then be made with Yanmar America Cooperation and the distributor.

If you have any questions regarding this advisory please contact Yanmar America Manager of Customer Support at (770) 877- 9894.

New Marine Replacement Engine Order Form

The new replacement engine must be the same emissions certification or later model year as the engine being replaced.

- The new replacement engine can only be installed into the marine vessel that contains the original engine being replaced.

- Modifications to any engine emission control system including but not limited to the: air system, fuel system and electronic controls is strictly prohibited.

- The new replacement engine must be maintained and operated according to the Yanmar approved Operation Manual provided with each unit.

Fill in all information requested on this form:

1. Distributor Name:

_____

2. Distributor Representative Name

Print: _____

Signature: _____

3. If for stock order, (Yes) or (No) : _____

4. P.O. Number from distributor : _____

5. Model Name and Unit number

Model number : _____ Unit number : _____

6. Purpose (Please select among them)

6-1 Replacement 6-2 NSE 6-3 Export

7. Vessel Owner's Name:

_____

8. Vessel Manufacturer and HIN:

_____

9. Engine model and Serial Number(s):

_____

10. In-Service Date:

_____

11. Failure Date and Detail Description:

_____

_____

_____

12. Total Running Hours on Failed Engine(s):

_____

13. Reason for Request of EPA Non-Compliant Engine as Replacement Engine:

_____

_____

_____

_____

14. Attach photos of failed engine(s) along with specific remarks/notes: Please use attachment form below.

Received and accepted at Yanmar by:

_____

Date: _____

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A

Original Engine Disposition Form - Destruction

submittance date : _____

Distributor name. : _____ Dist representative name : _____

1. Original engine information (Being replaced engine) print name

Model name : _____ Claim No. : _____
(if you have)

Serial No. : _____

2. The replacement engine information

Model name : _____

Serial No. : _____

3. Reason for need non-EPA replacement engine

_____
_____
_____
_____

4 The new replacement engine shipment date from distributor :_____

5 Application information (replacement engine installation information)
Vessel Model name : _____
Vessel Serial No. : _____

6. Visual evidence (image file) of destruction of the original being replaced

(1) The disposition date of the original engine being replaced :_____

(2) The condition of the cylinder block
(after making a hole)

(3) Engine Name Plate

Dist representative signature : _____

Replacement engine list

B

Replacement model					being replaced engine model			
Engine model	Regulation			Selection reason of Replacement engine	Engine model	Regulation		
	EPA	RCD	IMO			EPA	RCD	IMO
4LHA-HTP	X	Stage 1	X	HTE was discontinued and can not be built. Output difference is only 5% up(rpm is same). Alternative model does not exist except for HTP, including competitors' model.	4LH-HTE	X	X	X
					4LHA-HTE	X	X	X
					4LHA-HTP	X	Stage 1	X
4LHA-DTP	X	Stage 1	X	DTE was discontinued and can not be built. Output difference is only 5% up(rpm is same). Alternative model does not exist except for DTP, including competitors' model.	4LH-DTE	X	X	X
					4LHA-DTE	X	X	X
					4LHA-DTP	X	Stage 1	X
4LHA-STP	X	Stage 1	Tier 1 (EPA, GL) Tier 2 (GL)	STE was discontinued and can not be built. Output difference is only 5% up(rpm is same). Alternative model does not exist except for STP, including competitors' model. All model meets IMO Tier1and STP meets IMO Tier2.	4LH-STE	X	X	Tier 1 (EPA, GL)
					4LHA-STE	X	X	Tier 1(EPA, GL)
					4LHA-STP	X	Stage 1	Tier 1(EPA, GL) Tier 2 (GL)
6LPA-STP2	Tier 2	Stage 1	Tier 1 (EPA, GL) Tier 2 (EPA, GL)	STE and STP were discontinued and can not be built. Alternative model does not exist except for STP2, including competitors' model.	6LP-STE	X	X	Tier 1 (EPA, GL)
					6LPA-STE	X	X	X
					6LPA-STP	X	Stage 1	Tier 1 (EPA, GL)
					6LPA-STP2	Tier 2	Stage 1	Tier 1 (EPA, GL) Tier 2 (EPA, GL)
6LYA-STP	X	Stage 1	Tier 1 (EPA, GL) Tier 2 (GL)	STE was discontinued and can not be built. Output difference is only 5% up(rpm is same). Alternative model does not exist except for STP, including competitors' model. All model meets IMO Tier1and STP meets IMO Tier2.	6LY-STE	X	X	Tier 1 (EPA)
					6LYA-STE	X	X	Tier 1 (EPA, GL)
					6LYA-STP	X	Stage 1	Tier 1 (EPA, GL) Tier 2 (GL)
6LY2A-STP	X	Stage 1	Tier 1 (EPA, GL) Tier 2 (GL)	STE was discontinued and can not be built. Output difference is only 5% up(rpm is same). Alternative model does not exist except for STP, including competitors' model. All model meets IMO Tier1and STP meets IMO Tier2.	6LY2-STE	X	X	Tier 1 (EPA)
					6LY2A-STE	X	X	Tier 1 (GL)
					6LY2A-STP	X	Stage 1	Tier 1 (EPA, GL) Tier 2 (GL)
4LHA-STP	X	Stage 1	Tier 1 (EPA, GL) Tier 2 (GL)	Alternative model does not exist except for 4LHA−STP, including competitors' model. Output is almost same.	6LP-DTE	X	X	Tier 1 (EPA)
					6LPA-DTE	X	X	X
					6LPA-DTP	X	Stage 1	Tier 1 (EPA)
6CXBM-GT (S)	X	X	Tier 2 (GL)	GTE and GTE2 were discontinued and can not be built. Output difference is within 10%.	6CXM-GTE	X	Stage 1	Tier 1 (EPA)
					6CXM-GTE2	X	Stage 1	Tier 1 (EPA)

Remark

(1) X: Not applicable

(2) NK is not included in IMO.